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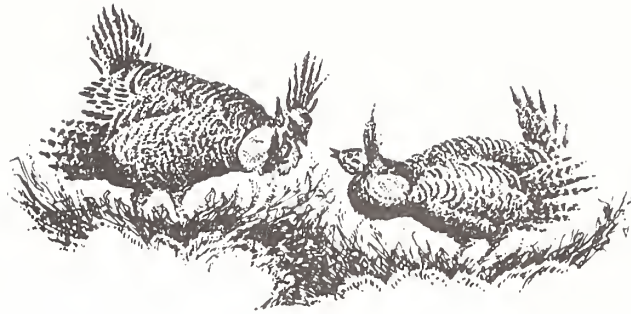
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Habitat management for

PRAIRIE CHICKEN



In Kansas

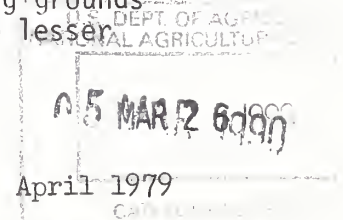
Two species of prairie chicken or pinnated grouse occur in Kansas. The greater prairie chicken (*Tympanuchus cupido*) is found primarily in the eastern one-half of the state or the tall grass prairie region, while the lesser prairie chicken (*Tympanuchus pallidicinctus*) is usually restricted to the sand prairie areas of southwest Kansas. (Fig. 1)

An average of 35,000 prairie chickens have been harvested annually by Kansas hunters over the last 16 years, but this figure can vary greatly due to population numbers, accessibility of birds, and season timing.

The identifying or distinguishing characteristics of the two species of prairie chicken include size, color, and the sounds which they make. A greater prairie chicken produces a resonant booming sound, much like the sound made by blowing across a bottle. The voice of lesser chickens resembles the gobbling turkey call. The average male greater prairie chicken will weigh approximately two pounds, while the lesser averages slightly under two pounds. The greater prairie chicken is usually darker in color than the lesser and has a solid black barring pattern on the back feathers. The lesser's back feathers have brown stripes with black lines on either side.

Both species have long feathers or pinnae on the sides of the neck. These long stiff wing-like feathers which can be raised above the head and are characteristic of the name pinnated grouse. Under these pinnae are loose patches of bare skin or air sacs which are expanded during the mating ritual. The greater prairie chicken's air sacs are yellow-orange in color while the lesser's sacs are rose-red. The males of both species have bare patches of yellow skin over their eyes. Both species have feathers on their lower legs which is a distinguishing characteristic of all grouse.

The courtship ritual of the prairie chicken is a colorful display of activity designed to attract females. This gobbling or booming activity is performed by the male prairie chickens on sparsely vegetated flat, raised, or rolling areas known as "display grounds" or "booming grounds" for the greater prairie chicken and "gobbling grounds" for the lesser prairie chicken.



Each spring, beginning in March and continuing through May, the males gather in the early morning and evening at the traditional booming grounds. Booming ground activity is greater in the morning than the evening. The hens begin coming to the booming grounds in mid-March. At first their visits are short and their arrival is greeted by great activity by all cocks. By early April, hens visit the booming grounds regularly and stay for longer periods. Hens never take part in the booming or gobbling activities and outwardly pay little attention to the displaying males. Mating occurs on the display grounds as well as surrounding areas.

Each male claims a territory or a small area on the display grounds. The male will defend his territory from other displaying males, but usually the resulting fights are just a show and at most only a few feathers will be lost.

Many display grounds are used in the fall during October as well as in the spring. Participation in fall displays on the display grounds is not as great as in the spring. Fall display activity lacks vigor and enthusiasm, and may be a learning period for the young of the year.

Nesting begins in April or early May. The nesting location is usually a native grass area. Medium dense stands of mid-grass or other cover provide the best nesting areas. Eggs are laid at the rate of one a day until the clutch of 11 or 12 olive-tan eggs is completed. Incubation usually takes 23 to 24 days. The young birds leave the nest after hatching and begin feeding on insects. The brood remains together for 8 to 10 weeks before joining flocks in August. Young birds from the same brood may join different flocks, and starting in September, the flocks tend to separate according to sex. Males seem to flock more readily than females.

The average life span of a prairie chicken is around one year, although some individuals live longer. Natural mortality is high in that approximately 50 to 60 percent of the birds die and are replaced by young birds each year.

HABITAT NEEDS

Food--During the spring and summer, prairie chickens feed heavily upon insects and native prairie plants. In fall and winter, the prairie chickens' diet consists primarily of cultivated grain crops such as corn, sorghum, and wheat. Winter food and cover should usually occur within an area 4 to 6 sections in size.

Cover--Loafing, roosting, escape, and nesting cover consist of tall or medium-height grass or grass and shrub mixtures. Properly managed native prairie provides ideal cover for greater prairie chickens, while

lesser prairie chickens utilize grass-shrub mixtures for cover. The same habitat is used as winter cover and during severe conditions, prairie chickens burrow into deep snow for cover. Booming ground cover consists of low or slightly rolling land with exposed wide horizons where grass has been flattened or grazed.

Water--Drinking water is usually obtained from existing sources and is not a limiting factor due to the large seasonal range of the prairie chicken. Dew and succulent vegetation are also used.

HABITAT MANAGEMENT SUGGESTIONS

Ideal prairie chicken habitat would be composed of approximately 60 percent native or permanent grassland and 40 percent cropland. Tall grasses are the primary habitat for greater prairie chickens. The Flint Hills area of Kansas contains the largest greater prairie chicken population in the world. The lesser prairie chicken is adapted to the mid to short grass areas. The sand-sage prairie area in southwest Kansas supports the majority of the state's lesser prairie chickens. This prairie area is rapidly being lost due to increases in irrigation and other land use changes.

The sound management of native grassland for livestock production is also beneficial in preserving the habitat needs of prairie chickens. Overgrazing and annual burning of large areas of native grassland is detrimental to prairie chicken populations. Soil conservation practices, such as crop residue management, are also helpful in maintaining a quality habitat.

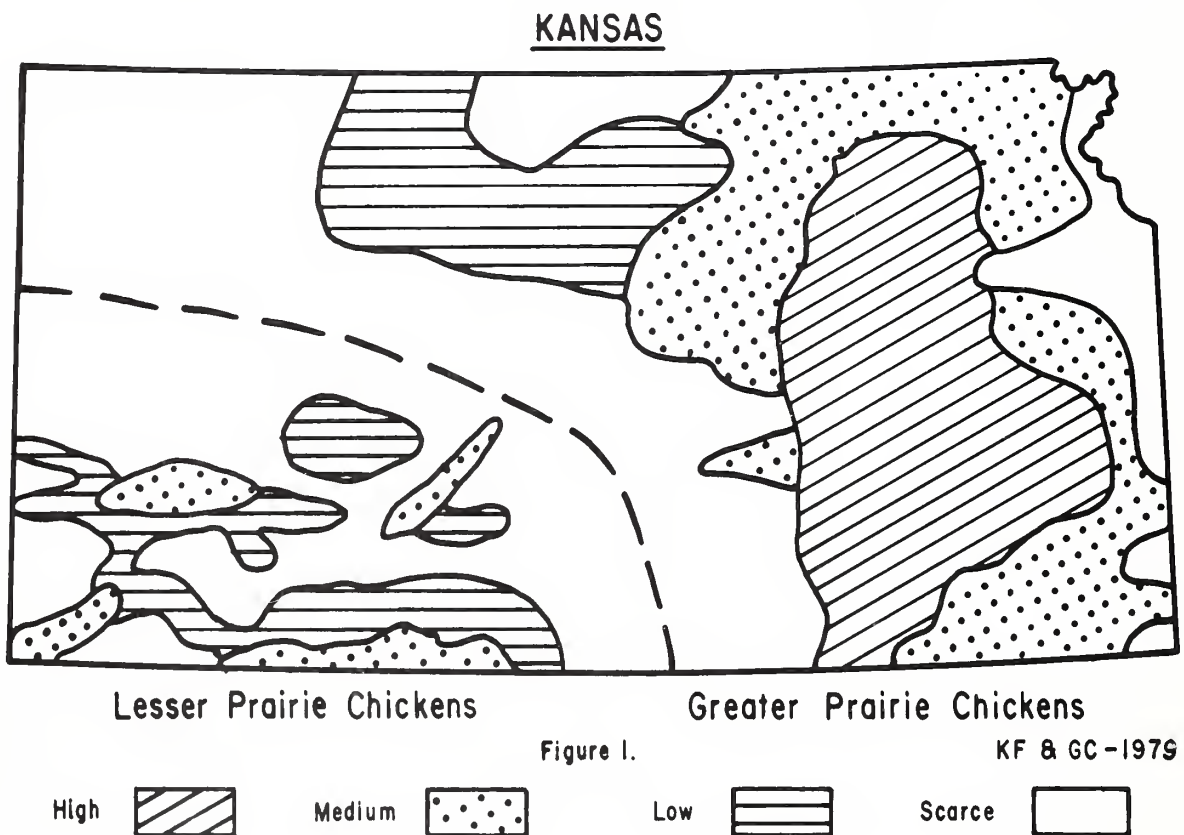
The following habitat management suggestions will enhance prairie chicken habitat:

1. Maintain the optimum grassland/cropland balance or ratio of approximately 60 to 40 within each seasonal range. Grassland units should be in parcels larger than 80 acres.
2. Maintain proper grazing use on all grassland areas. Moderately grazed grasslands usually provide good cover.
3. Remove weeds or other tall vegetation from booming grounds.
4. Leave standing grain crops such as corn or sorghum for winter food. Food patches of 1/4 acre or more in size should occur at a rate of 6 or 7 per township.
5. Avoid fall plowing of cropland.
6. Avoid uncontrolled burning and limit controlled burning to areas where control of plant succession is needed.

7. Avoid grazing by livestock on cropland which is frequented by wintering prairie chicken flocks.
8. Avoid disturbance and overuse of "booming grounds" by spectators.

The Soil Conservation Service, local conservation districts, the Kansas Fish and Game Commission, and the Kansas State University Cooperative Extension Service offer competent guidance on soil, water, plants, and wildlife habitat management.

GENERAL DENSITY DISTRIBUTION OF THE PRAIRIE CHICKEN*



* Locally abundant populations can occur in all areas where sufficient habitat is available.



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